|   | Application No.  | Applicant(s)  |
|---|--|---|
|   | 10/613,109   | WEN ET AL.  |
| Notice of Allowability  | Examiner   | Art Unit  |
|   | Jim Vannucci   | 2828  |
| The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313   | (OR REMAINS) CLOSED i<br>) or other appropriate comm<br>(IGHTS. This application is:   | n this application. If not included unication will be mailed in due course. THIS  |
| 1. This communication is responsive to the RCE filed March  | <u>10, 2005</u> .  |   |
| 2. The allowed claim(s) is/are 19 and 21-37.  |  |   |
| 3. $\boxtimes$ The drawings filed on <u>02 July 2003</u> are accepted by the E  | xaminer.   |   |
| <ul> <li>4. Acknowledgment is made of a claim for foreign priority uner a) All b) Some* c) None of the:  1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have 1. Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</li> <li>5. A SUBSTITUTE OATH OR DECLARATION must be subminformal pattern application (PTO-152) which give 6. CORRECTED DRAWINGS (as "replacement sheets") muer (a) including changes required by the Notice of Draftsper 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner Paper No./Mail Date (b) including changes required by the attached Examiner Paper No./Mail Date (b) Including such as the application number (see 37 CFR 1) each sheet. Replacement sheet(s) should be labeled as such in the deposit of the paper No./Mail Date (compared by the Altached Examiner's comment regarding REQUIREMENT)</li> </ul> | e been received. e been received in Application of the communication to file MENT of this application.  Initted. Note the attached EX reason(s) why the oath of the submitted. Son's Patent Drawing Review. Is Amendment / Comment of the header according to 37 Clipsit of BIOLOGICAL MAT | on No d in this national stage application from the e a reply complying with the requirements  AMINER'S AMENDMENT or NOTICE OF r declaration is deficient.  W ( PTO-948) attached r in the Office action of the drawings in the front (not the back) of ER 1.121(d).  ERIAL must be submitted. Note the |
| Attachment(s)  1. ☐ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB/Paper No./Mail Date 1-5-04 & 3-10-05  4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material   | 6. ☐ Interview S<br>Paper No.<br>08), 7. ☐ Examiner's  | formal Patent Application (PTO-152)  ummary (PTO-413),  /Mail Date Amendment/Comment  Statement of Reasons for Allowance   James Vannus   |

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

## **DETAILED ACTION**

## Allowable Subject Matter

- 1. Claims 19 and 21-37 are allowed.
- 2. The following is an examiner's statement of reasons for allowance.

Using a monopole and a dipole element together in a multiple element antenna is well known in the art. The limitations that further limit this invention are the limitations that distinguish it over the prior art. These are the limitations concerning fabricating the dipole element in close proximity to the monopole element on the same substrate so the two elements electromagnetically couple.

This arrangement was not found in the prior art.

While all of the recited elements and limitations can be found in the prior art. combining those prior art references was not proper because of the lack of proper motivation. In most cases, individual elements in a multiple element antenna are designed to function without cross coupling. Also, having both the monopole and the dipole elements being actively fed as opposed to one of the elements being passive was found to be further limiting. Having both elements formed on the same substrate was further limiting because often times a ground plane is required for the monopole and not required for the dipole operation, and having both elements on the same substrate makes it difficult to properly position the ground plane. As a result of these factors, any combination of prior art references would, in the examiner's opinion, would be done with hindsight reasoning. . Art Unit: 2828

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on March 10, 2005 has been considered by the examiner.

## Correspondence

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 872-9306.

James Vannucci